

# Acceptability of multi-cancer early detection (MCED) blood tests as a population-based screening programme: A qualitative study in Great Britain

Ninian Schmeising-Barnes, Jo Waller, Laura AV Marlow  
Cancer Prevention Group, Cancer and Pharmaceutical Sciences, King's College London

## Background

Trials are underway to assess the clinical effectiveness of multi-cancer early detection (MCED) blood tests in asymptomatic individuals.<sup>1</sup>

Understanding the acceptability of a new screening test in the target population is vital to ensure successful implementation.

Acceptability can include attitudes to the intervention, beliefs about ethicality, perceived effectiveness and anticipated burden.<sup>2</sup>

We sought to understand the public acceptability of MCED blood tests and potential barriers and facilitators to participation.



## Methods

- We conducted 11 online focus groups with 50–77-year-olds.
- Participants were purposefully sampled to include a range of socio-economic and ethnic backgrounds and some participants who would not want a blood test for cancer.
- Participants were shown information about MCED blood tests and asked to discuss their views.
- Reflexive thematic analysis<sup>3</sup> was used to identify themes across the groups and was aided by NVivo 1.7.

Table 1: Characteristics of the sample (n=53)

	n
<b>Sex</b>	
Female	28
Male	25
<b>Age</b>	
50-59	27
60-69	14
70+	12
<b>Ethnicity</b>	
Any White background	24
Other ethnic background	29
<b>Screening attendance</b>	
Never had screening	26
Attended some but not all	10
Attended all	16

## Results

### Procedural familiarity and multi-cancer testing makes sense

- Enthusiasm about MCED screening was driven by familiarity with blood tests
- Participants were pleased to screen for multiple cancers at once

*I've had a lot of blood tests over the years. So it wouldn't bother me in the slightest* (F, 54, G9)

### Cancer is an increasing risk and early detection is beneficial

- Participants believed that their risk of cancer was increasing as they aged and valued early detection to improve cancer outcomes

*From 50 onwards, you're in an age group that... you can, like, get cancer* (F, 51, G9)

### Anticipated anxiety

- Anxiety was anticipated at several stages including waiting for and receiving results
- For some, having follow-up tests but no cancer found would break their trust in MCED screening, resulting in future non-participation
- Some felt having a positive signal, but no cancer found, might lead them to live "in fear" that cancer might "manifest" in the future
- Most considered this anxiety to be "worth it"

*Because my anxiety would be through the roof... all that waiting would be quite nerve wracking* (F, 51, G8)

### Avoiding unpleasant procedures where possible

- Participants were keen to reduce unpleasant procedures
- Blood tests were seen as less unpleasant than existing screening
- Needing to attend current screening as well as MCED screening was considered "disappointing"

*If we're still going to have to have the other tests as well, I don't see the point* (F, 57, G5)

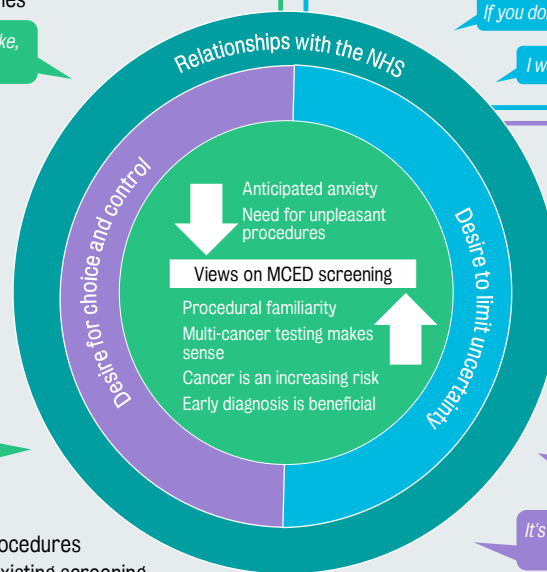
- The potential for MCED screening to catch cancer earlier and reduce the need for unpleasant treatments was seen as a benefit
- For some, the prospect of any unpleasant medical procedures if cancer was found was a barrier to MCED screening

### Desire to limit uncertainty

- MCEDs offered an opportunity to reduce uncertainty around cancer status
- Uncertainty was also reduced by familiar procedures (i.e. a blood test) offered in a familiar way (i.e. at a GP or hospital)
- Potential uncertainty about results and during the diagnostic period resulted in anticipated anxiety, which some would want to avoid
- The accuracy of MCED screening was identified as a potential source of uncertainty

*If you don't know you've got it then you can't do anything about it* (M, 71, G1)

*I want to know... so the sooner I learn about it the better* (M, 60, G2)



### Desire for choice and control

- MCED screening was seen as a positive way to take control over one's health and risk of cancer
- This would give more choice over treatment if diagnosed with cancer
- A desire for choice and control extended to preferences for implementation of MCED screening e.g. appointments

*It's fairly important to have early diagnosis of anything, because then you have the time to think through possible treatments and investigations* (M, 55, G11)

*It's got to be like, it's got to work in the way I work or when I want to go for it* (M, 50, G1)

### Relationships with the NHS

Perceptions of the NHS, including trust in the NHS and current NHS strain, impacted acceptability of an MCED screening programme and views on implementation

*But I've got no trust in the NHS at all* (F, 59, G1)

*If they can't cope with existing ones, I can't see how they cope with all these new ones without getting more staff* (F, 54, G4)

## Key findings:

- Screening for multiple cancers at once and using a familiar procedure (blood test) were seen as key benefits to MCED screening.
- MCED screening could reduce uncertainty in relation to cancer and give people control over their health.
- Concerns about MCEDs were mostly around diagnostic follow-up procedures, cancer treatment, anxiety and test accuracy.

## Implications

- If MCED screening is implemented, it will be important to support individuals to weigh up the benefits and risks of participation
- MCED screening will not be acceptable to all, and it is vital to ensure concerns regarding accuracy, unpleasant procedures and anxiety are respected

### Acknowledgments

This work was funded by GRAIL, LLC.  
We acknowledge the support of our PPI panel.  
Contact: [ninian.schmeising-barnes@kcl.ac.uk](mailto:ninian.schmeising-barnes@kcl.ac.uk)